Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. - 44. (Cancelled).

45. (Currently Amended) In a radio network having a plurality of base stations, each providing wireless communication services for mobile units in a respective geographic coverage area that may or may not overlap with the geographic coverage areas of other of the base stations, and an interface connected to the base stations, a method of handoff a wireless communication with a mobile unit conducted via a first base station to a second base station comprising:

detecting a handover trigger event during the mobile unit's wireless communication via the first base station;

transmitting an omnidirectional sounding pulse from the mobile unit in response to a detected handover trigger;

communicating information related to the detected sounding pulse to the interface by each base station detecting the sounding pulse;

selecting the second base station from the base stations that detected the sounding pulse based on the communicated information; and

continuing the mobile unit's wireless communication via the selected second base station.

46. (Previously presented) The method of claim 45 wherein each base station has a selectively operable beamforming antenna, further comprising:

determining a relative location of the mobile unit with respect to the beamforming antennas of base stations neighboring the first base station and directing beacon channels of the neighboring base stations toward the mobile unit location to receive the transmitted sounding pulse.

47. (Previously presented) The method of claim 45 wherein each base station has a selectively operable beamforming antenna, further comprising:

determining a relative location of the mobile unit with respect to the beamforming antennas of base stations neighboring the first base station and commanding the neighboring base stations to sweep beacon channels over an arc encompassing the mobile unit location to receive the transmitted sounding pulse.

48. (Previously presented) The method of claim 45 wherein:

the radio network is a UMTS Terrestrial Radio Access Network (UTRAN), each base station is a Node B, the interface is a Radio Network Controller (RNC) and the mobile unit is a mobile User Equipment (UE);

the communicating information is between Node Bs and the RNC via an Iub or combination Iub/Iur interface;

the second base station selection is performed by the RNC by selecting a second Node B; and

the UE's communication continued via the second Node B is via a Uu interface.

49. (Previously presented) The method of claim 48 wherein each Node B has a selectively operable beamforming antenna, further comprising:

determining a relative location of the UE with respect to the beamforming antennas of Node Bs neighboring the first Node B and directing beacon channels of the neighboring Node Bs toward the UE location to receive the transmitted sounding pulse.

50. (Previously presented) The method of claim 48 wherein each Node B has a selectively operable beamforming antenna, further comprising:

determining a relative location of the UE with respect to the beamforming antennas of Node Bs neighboring the first Node B and commanding the neighboring Node Bs to sweep beacon channels over an arc encompassing the UE location to receive the transmitted sounding pulse.

51. (Previously presented) The method of claim 48 wherein each Node B has a selectively operable beamforming antenna, further comprising:

determining a relative location of the UE with respect to the beamforming antenna of the selected second Node B based on information related to the detected sounding pulse whereby the continuing of the UE's communication via the second Node B includes operating the selected Node B's antenna to form a communication beam for at least one dedicated channel covering a selected portion of the coverage area serviced by the second Node B that encompasses the determined relative location of the UE.

52. (Previously presented) The method of claim 48 wherein the UE has a selectively operable beamforming antenna further comprising:

determining a relative location of the second Node B with respect to the beamforming antenna of the UE based on information related to the detected sounding pulse whereby the continuing of the UE's communication via the second Node B includes operating the UE's antenna to form a communication beam toward the second Node B.

53. (Previously presented) The method of claim 45 wherein each base station has a selectively operable beamforming antenna, further comprising:

determining a relative location of the mobile unit with respect to the beamforming antenna of the selected base station based on information related to the detected sounding pulse whereby the continuing of the mobile unit's communication via the second base station includes operating the selected base station's antenna to form a communication beam covering a selected portion of the coverage area serviced by the selected base station that encompasses the relative location of the mobile unit.

54. (Previously presented) The method of claim 53 wherein the formed communication beam carries common channels and the operating the selected base station's antenna to form a communication beam that encompasses the relative location of the mobile unit is conducted such that other mobile units with which the selected base station is conducting wireless communication are also encompassed within the formed communication beam so that the formed beam provides common channel service to a plurality of mobile units.

55. (Previously presented) The method of claim 45 wherein the mobile unit has a selectively operable beamforming antenna and the transmitting an

omnidirectional sounding pulse from the mobile unit is performed by transmitting multiple sounding pulses that sweep through 360 degrees or a set of calculated arcs.

56. (Previously presented) The method of claim 45 wherein the mobile unit is equipped with a global positioning system (GPS) and the transmitting of an omnidirectional sounding pulse includes transmitting of mobile unit location information associated with the sounding pulse transmitted by the mobile unit and/or includes transmitting of identification information associated with the sounding pulse transmitted the mobile unit.

57. (Previously presented) The method of claim 45 wherein the transmitting of an omnidirectional sounding pulse includes transmitting a subsequent sounding pulse of increased power by the mobile unit if handover does not occur within a predefined time period from its transmitting of an omnidirectional sounding pulse.

58. (Previously presented) The method of claim 45 wherein the transmitting of an omnidirectional sounding pulse includes transmitting a series of omnidirectional sounding pulses of increasing power from the mobile unit.

59. (Currently Amended) A communication network for wireless communication with mobile units comprising:

a plurality of base stations, each providing wireless communication services in a geographic coverage area that may or may not overlap with the geographic coverage areas of other of the base stations;

at least one base station interface connected to the base stations such that each base station has a controlling interface associated with its base station to mobile unit wireless communications;

each base station configured to detect sounding pulses emitted from mobile units in order to establish wireless communication with such mobile units for the handover of an on-going wireless communication between a mobile unit and another base station;

each base station configured to communicate information related to a detected sounding pulse from a mobile unit to a selected interface;

each interface, when acting as a controlling interface for a serving base station where a communication of a communicating mobile unit is conducted via the serving base station, configured to select a handover base station for continuing the wireless communication of the communicating mobile unit based on information communicated from each base station that detected a sounding pulse emitted from the communicating mobile unit during the communication with the serving base station; and

each base station configured to direct a communication beam when selected as the handover base station for a communicating mobile unit to continue the communicating mobile unit's wireless communication via the handover base station.

60. (Previously presented) The invention of claim 59 wherein each base station has a selectively operable beamforming antenna and each interface, when acting as a controlling interface for a serving base station where a communication of a communicating mobile unit is conducted via the serving base station, is configured to command base stations neighboring the serving base station to direct beacon

channels of the neighboring base stations toward a determined location of the communicating mobile unit to receive the transmitted sounding pulse.

61. (Previously presented) The invention of claim 59 wherein each base station has a selectively operable beamforming antenna and each interface, when acting as a controlling interface for a serving base station where a communication of a communicating mobile unit is conducted via the serving base station, is configured to command base stations neighboring the serving base station to sweep beacon channels over an arc encompassing a determined location of the communicating mobile unit to receive the transmitted sounding pulse.

62. (Previously presented) The invention of claim 59 wherein the radio network is a UMTS Terrestrial Radio Access Network (UTRAN), each base station is a Node B configured to communicate with mobile units configured as mobile User Equipments (UEs) via a Uu interface, and each base station interface is a Radio Network Controller (RNC) configured for communicating information with the Node Bs via an Iub interface or combination Iub/Iur interface in connection with another RNC.

63. (Previously presented) The invention of claim 62 wherein each Node B has a selectively operable beamforming antenna configurable to direct a communication beam covering a selected portion of the coverage area serviced by the Node B that encompasses the relative location of a communicating UE when that Node B is selected as the handover Node B for a wireless communicate of the communicating UE.

64. (Previously presented)The invention of claim 63 wherein each Node B is configured to operate its antenna to form a communication beam that carries common channels that encompasses the relative location of a plurality of UEs so that the formed beam provides common channel service to a plurality of UEs.

65. (Previously presented) The invention of claim 59 wherein:

each base station has a selectively operable beamforming antenna,

each interface, when acting as a controlling interface for a serving base station where a communication of a communicating mobile unit is conducted via the serving base station, is configured to determine a relative location of the communicating mobile unit so that the interface can command neighboring base stations of the serving base station to selectively direct their beamforming antennas towards the determined relative location of the communicating mobile unit when the mobile unit is to emit a sounding pulse for initiating handover.

66. (Previously presented) The invention of claim 65 further comprising mobile units, each configured to transmit an omnidirectional sounding pulse to initiate handover from a serving base station to a handover base station.

67. (Previously presented) The invention of claim 66 wherein the mobile units are each configured to monitoring the power level of a directed communication beam from a base station that is received by the mobile unit and to transmit an omnidirectional sounding pulse if the monitored power level falls below a predefined level.

68. (Previously presented) The invention of claim 66 wherein each mobile unit is configured to transmit a subsequent omnidirectional sounding pulse if a directed communication beam is not received from a handover base station within a predefined time period from transmitting an omnidirectional sounding pulse.

69. (Previously presented) The invention of claim 66 wherein each mobile unit is equipped with a global positioning system (GPS) and is configured to transmit of an omnidirectional sounding pulse that includes mobile unit location information determined by its GPS and/or mobile unit identification information.

70. (Previously presented) The invention of claim 66 wherein each mobile unit has a selectively operable beamforming antenna configured to transmit of an omnidirectional sounding pulse by transmitting multiple sounding pulses that sweep through 360 degrees or a set of calculated arcs.

71. (Previously presented) A communication network for wireless communication comprising:

a plurality of base stations, each providing wireless communication services in a geographic coverage area that may or may not overlap with the geographic coverage areas of other of the base stations;

mobile units, each configured to transmit an omnidirectional sounding pulse during a wireless communication via a serving base station upon the occurrence of a handover trigger event to initiate handover to continue the communication via a handover base station and to select the handover base station based on reception of information communicated from base stations responding to the sounding pulse

within a predefined time period from its transmitting of an omnidirectional sounding pulse;

each base station configured to detect sounding pulses emitted from mobile units in order to establishment wireless communication with such mobile units;

each base station configured to communicate information related to a detected sounding pulse from a mobile unit to the mobile unit; and

each base station configured to direct a communication beam when selected as the handover base station for a communicating mobile unit to continue the communicating mobile unit's wireless communication via the handover base station.

72. (Previously presented) The invention of claim 71 further comprising

at least one base station interface connected to the base stations such that each base station has a controlling interface associated with its base station to mobile unit wireless communications; and

each interface, when acting as a controlling interface for a serving base station where a communication of a communicating mobile unit is conducted via the serving base station, is configured to determine a relative location of the communicating mobile unit so that the interface can command neighboring base stations of the serving base station to selectively direct their beamforming antennas towards the determined relative location of the communicating mobile unit when the mobile unit is to emit a sounding pulse for initiating handover.

73. (Previously presented) The invention of claim 71 wherein each mobile unit is configured to transmit a subsequent sounding pulse of increased power if insufficient information to affect handover is not received within a predefined time period from its transmitting of an omnidirectional sounding pulse.

74. (Previously presented) In a radio network having a plurality of base stations, each providing wireless communication services in a respective geographic coverage area that may or may not overlap with the geographic coverage areas of other of the base stations, a method for handoff of a wireless communication conducted by a communicating mobile unit via a serving base station to a handover base station comprising:

transmitting an omnidirectional sounding pulse from the communicating mobile unit during the wireless communication upon the occurrence of a triggering event;

directing a communication beam from base stations detecting the sounding pulse towards the mobile unit;

selecting a handover base station from the base stations that detected the sounding pulse based on the communication beams received by the mobile unit; and

continuing the wireless communication via the selected handover base station.

75. (Previously presented) The method of claim 74 wherein the radio network has an interface connected to the base stations, further comprising:

communicating information related to the detected sounding pulse to the interface by each base station detecting the sounding pulse;

choosing one or more of the base stations that detected the sounding pulse for responding to the mobile unit sounding pulse based on the communicated information so that only the chosen base stations direct a communication beam to the mobile unit.

76. (Previously presented) The method of claim 75 wherein:

the radio network is a UMTS Terrestrial Radio Access Network (UTRAN), each base station is a Node B, the interface is a Radio Network Controller (RNC) and the mobile unit is a mobile User Equipment (UE);

the communicating information is between Node Bs and the RNC via an Iub or combination Iub/Iur interface; and

the communication of the UE via Node Bs is via a Uu interface.

77. (Previously presented) The method of claim 76 wherein each Node B has a selectively operable beamforming antenna, further comprising:

determining a relative location of the UE with respect to the beamforming antenna of each sounding pulse detecting Node B based on information related to the detected sounding pulse whereby the directing of a communication beam includes operating the respective Node Bs' antennas to form communication beams that each cover a selected portion of the coverage area serviced by the respective Node B that encompasses the relative location of the UE.

78. (Previously presented) The method of claim 74 wherein each base station has a selectively operable beamforming antenna, further comprising:

determining a relative location of the communicating mobile unit with respect to the beamforming antenna of each sounding pulse receiving base station based on information related to the detected sounding pulse whereby the directing of a communication beam includes operating the respective base station's antenna to form a communication beam covering a selected portion of the coverage area serviced by the respective base station that encompasses the relative location of the mobile unit.

79. (Previously presented) The method of claim 78 wherein each respective formed communication beam carries common channels and the operating each respective base station's antenna to form a communication beam that encompasses the relative location of the mobile unit is conducted such that other mobile units with which the respective base station is conducting wireless communication are also encompassed within the formed communication beam.

80. (Previously presented) The method of claim 74 wherein the mobile unit has a selectively operable beamforming antenna and the transmitting an omnidirectional sounding pulse from the mobile unit is performed by transmitting multiple sounding pulses that sweep through 360 degrees or a set of calculated arcs.

81. (Previously presented) The method of claim 74 wherein the mobile unit is equipped with a global positioning system (GPS) and the transmitting of an omnidirectional sounding pulse includes transmitting of mobile unit location information associated with the sounding pulse transmitted by the mobile unit and/or includes transmitting of identification information associated with the sounding pulse transmitted the mobile unit.

82. (Previously presented) The method of claim 74 wherein the transmitting of an omnidirectional sounding pulse includes transmitting a series of omnidirectional sounding pulses of increasing power from the mobile unit.

83. (Previously presented) A mobile unit for use in a radio network having a plurality of base stations, each base station providing wireless communication

services in a respective geographic coverage area that may or may not overlap with the geographic coverage areas of other of the base stations, the mobile unit comprising:

a transmitter configured to transmit an omnidirectional sounding pulse based on the occurrence of a triggering event during a wireless communication conducted via a serving base station;

a receiver configured to receive communication beams from base stations that detected a sounding pulse transmitted by the mobile unit; and

a processor configured to select a handover base station via which the mobile unit is to continue the wireless communication based on communication beams received by the mobile unit from base stations that detected the sounding pulse transmitted by the mobile unit.

84. (Previously presented) The invention of claim 83 wherein the mobile unit is configured to transmit a subsequent omnidirectional sounding pulse if a communication beam is not received from a base station that detected a sounding pulse transmitted by the mobile unit within a predefined time period from transmitting an omnidirectional sounding pulse.

85. (Previously presented) The invention of claim 83 wherein the mobile unit is equipped with a global positioning system (GPS) and is configured to transmit an omnidirectional sounding pulse that includes mobile unit location information determined by its GPS.

86. (Previously presented) The invention of claim 83 wherein the mobile unit is configured to transmit of an omnidirectional sounding pulse that includes mobile unit identification information.

87. (Previously presented) The invention of claim 83 wherein the mobile unit is configured to transmit a series of omnidirectional sounding pulses of increasing power upon the occurrence of a handover trigger event.

88. (Previously presented) The invention of claim 83 wherein each mobile unit has a selectively operable beamforming antenna configured to transmit of an omnidirectional sounding pulse by transmitting multiple sounding pulses that sweep through 360 degrees or a set of calculated arcs.